



CASE 1942.PC

#8
n.m.
3/25/03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF

CAO, ET AL.

S.N. 09/932,435

FILED: 17 AUGUST, 2001

FOR: USE OF XANTHAN GUM AS A HAIR
FIXATIVE

Group Art Unit: 1616

Examiner: GOLLAMUDI

Commissioner of Patents and Trademarks
Washington, D.C. 20231

DECLARATION UNDER RULE 132 (37 C.F.R. §1.132)

Sir:

I, John C. Leighton, a citizen of the United States of America, currently residing at 2 Patriots Way, Flanders, New Jersey 07836 declare as follows.

I am familiar with the issues raised in this case.

I graduated from University of Florida with a Bachelor of Science degree in Chemistry in 1979 and a Doctorate of Philosophy in Organic Chemistry in 1984.

Since 1984, I have worked at National Starch and Chemical Company. I am currently the Senior Director, Technology, for the Personal Care Division. In this and previous positions at the company, I have identified and developed a number of personal care products for the market, including several hair fixatives.

I am the inventor of 27 U.S. patents and numerous non-US patents. I have published in various trade journals and have presented at trade shows and to the industry.

My experience has provided me with a strong knowledge of various cosmetic product forms, leading-edge technologies, and the whole process of a product from concept to market.

The experiments below were conducted under my supervision and guidance to demonstrate that the prior art compositions would not be suitable for fixing hair as claimed in the above-identified application.

Materials

Formulation 17 in US Patent Number 6,017,860 (a shampoo containing 1% native xanthan gum) and Example 3 in JP 11-236310 (a skin cream containing 0.3% heat treated xanthan gum) were prepared as described.

Testing

High humidity curl retention test

The test was conducted at 72°F (22°C) and 90% Relative Humidity over a period of 8 hours. The procedure allows for statistical analysis of formulation variables. The percentage curl retention was calculated by: $\text{Curl Retention}\% = 100 \times (L - L_t) / (L - L_o)$, where L=length of hair fully extended, L_o=initial curl length, L_t=curl length at a given time t.

The test was performed on 10" long x 2 gram tresses of European virgin brown hair (9 replicate tresses per sample). Cleaned wet hair tresses were combed through to remove tangles and excess water is removed. 0.5 gram of sample hair gel was applied to each tress, gently "worked into" the hair tress and combed through. Curls of hair were made using ½" diameter Teflon mandrel, placed on a tray and dried in an oven overnight. The dried curls were removed from the oven and allowed to cool to room temperature. The curls were suspended from the bound end of the tress on graduated transparent curl retention boards. An initial curl length reading was taken before placing boards and curls into the environment chamber. Then curl lengths were recorded up to 8 hours. Curl retention averages were then calculated.

Results

Formulation	Average %Curl Retention Time=8 hours T=72°F; RH=90%
Formulation 17 in US 6017860	46
Example 3 in JP 11-236310	34

Conclusions-

As can be seen, neither prior art formulation provides high humidity curl retention of more than 80%. In contrast, the compositions of the above-identified patent application do provide high humidity curl retention, specifically over 80% as shown in Example 3 of the application. Therefore, the formulations described in US 6017860 and JP 11-236310 are not suitable to be used as hair cosmetic compositions.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by a fine or imprisonment or both under 1001 of Title 18 of the United States Code and such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed at Bridgewater, NJ, this March 4, 2003.
location date

John C. Leighton
John C. Leighton

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